

What is claimed is:

1. A remote meter reading system comprising:
a meter reading system for sending metering information of a subscriber
5 via an infrastructure of a mobile communication system to a remote control system
in communication with the meter reading system for collecting the metering
information of the subscriber.
2. The system of claim 1, wherein the metering information is
10 transferred to the remote control system via a short message service (SMS) of the
mobile communication system.
3. The system of claim 1, wherein the mobile communication
network operates based on a code division multiple access (CDMA) technology.
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4. The system of claim 1, wherein the meter reading system
comprises:
a meter reading unit in communication with at least one utility meter;
a converter unit for converting meterage information provided by the utility
20 meter into a digital signal;
a multiplexer for selecting the digital signal.
5. The system of claim 4, further comprising:
a controller for controlling the multiplexer's selection based on number of
25 meters in communication with the meter reading system.

6. The system of claim 4, further comprising:
a processor for generating a short message comprising the digital signal selected by the multiplexer.

5 7. The system of claim 6, further comprising:
a communication module for communicating the short message to the remote control system through the mobile communication network.

8. The system of claim 7, wherein the communication module acts as
10 an interface between the remote control system and the meter reading system to receive a message from the remote control system and transfer it to the processor.

9. The system of claim 8, wherein when a message is received from the remote control system, the processor decodes the received message and
15 stores identification information identifying the at least one utility meter.

10. The system of claim 9, wherein the controller controls the multiplexer based on the identification information.

20 11. The system of claim 8, wherein the message received from the control system comprises instructions to cut off supply to a subscriber.

12. The system of claim 8, wherein the message comprises at least one of:

25 an ID number of a subscriber;
an identifier of the utility meter;

meter-reading date and time information; and
information on failure of the meter and its energy leakage.

13. The system of claim 1, wherein the remote control system
5 comprises:

a communication module for wirelessly communicating a message with
the meter reading system;

a decoder for extracting metering information of a subscriber from the
message;

10 a processor for managing the extracted metering information and
generating at least one control signal for controlling the meter reading system; and

an encoder for generating a short message comprising the control signal
and providing the short message to the communication module.

15 14. The system of claim 8, wherein the message comprises at least
one of:

an ID number of a target subscriber;

an identifier identifying a utility meter to be read;

time information indicating time for reading the meter; and

20 control information to control supply to the target subscriber.

15 15. A short messaging structure for communicating information
between a meter reading system and a remote control system connected in a
mobile communication network, the short messaging structure comprising at least
25 one of:

a subscriber number of the meter reading system;

meter ID of a utility meter;
meter reading time for reading a utility meter; and
service control information for supplying utility to the subscriber.

5 16. The short messaging structure of claim 15, wherein the subscriber
number identifies a subscribing household to utility services.

17. The short messaging structure of claim 15, wherein the meter ID
identifies a utility meter utilized to measure usage of utility service provided to a
10 subscriber, identified by the subscriber number.

18. The short messaging structure of claim 15, wherein the meter
reading time provides a time for reading a utility meter identified by the meter ID.

15 19. The short messaging structure of claim 15, wherein the service
control information provides information to limit services provided to a subscriber
identified by the subscriber number.

20 20. A short messaging structure for communicating information
between a meter reading system and a remote control system connected in a
mobile communication network, the short messaging structure comprising at least
one of:

25 a subscriber number of the meter reading system;
meter ID of a utility meter;
meterage information about the subscriber's use;
meter reading time for reading a utility meter; and

meter state information indicating state of utility supplied to the subscriber.

21. A mobile communication-based remote meter reading method comprising sending metering information of a subscriber from a meter reading system to a remote control system in communication with the meter reading system via the infrastructure of a mobile communication system.

22. The method of claim 21, further comprising transferring the metering information to the remote control system via a short message service (SMS) of the mobile communication system.

23. The method of claim 21, wherein the mobile communication network operates based on a code division multiple access (CDMA) technology.

24. The method of claim 21, wherein a meter reading unit is in communication with at least one utility meter, the method further comprising:
converting meterage information provided by the utility meter into a digital signal; and
selecting the digital signal.

25. The method of claim 24, further comprising:
controlling the selection of the digital signal based on number of meters in communication with the meter reading system.

26. The method of claim 24, further comprising:
generating a short message comprising the selected digital signal.

27. The method of claim 26, further comprising:
communicating the short message to the remote control system through
the mobile communication network.

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28. The method of claim 27, wherein the communication module acts
as an interface between the remote control system and the meter reading system,
the method further comprising:

receiving a message from the remote control system and transfer it to a
10 processor in the meter reading system.

29. The method of claim 28, further comprising:
receiving a message from the remote control system;
decoding the received message by the processor; and
15 storing identification information identifying the at least one utility meter.

30. The method of claim 29, further comprising:
controlling the selection of the digital signal based on the identification
information.

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31. The method of claim 28, wherein the message received from the
control system comprises instructions to cut off supply to a subscriber.

32. The method of claim 28, wherein the message comprises at least
25 one of:
an ID number of a subscriber;

an identifier of the utility meter;
meter-reading date and time information; and
information on failure of the meter and its energy leakage.

5 33. The method of claim 28, wherein the message comprises at least
one of:

an ID number of a target subscriber;
an identifier identifying a utility meter to be read;
time information indicating time for reading the meter; and
10 control information to control supply to the target subscriber.

34. A remote control system in communication with a meter reading
system for collecting the metering information of a subscriber, wherein the meter
reading system sends metering information of the subscriber via an infrastructure
15 of a mobile communication system to the remote control system.

35. The system of claim 34, wherein the metering information is
transferred to the remote control system via a short message service (SMS) of the
mobile communication system.

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36. The system of claim 35, wherein the mobile communication
network operates based on a code division multiple access (CDMA) technology.

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